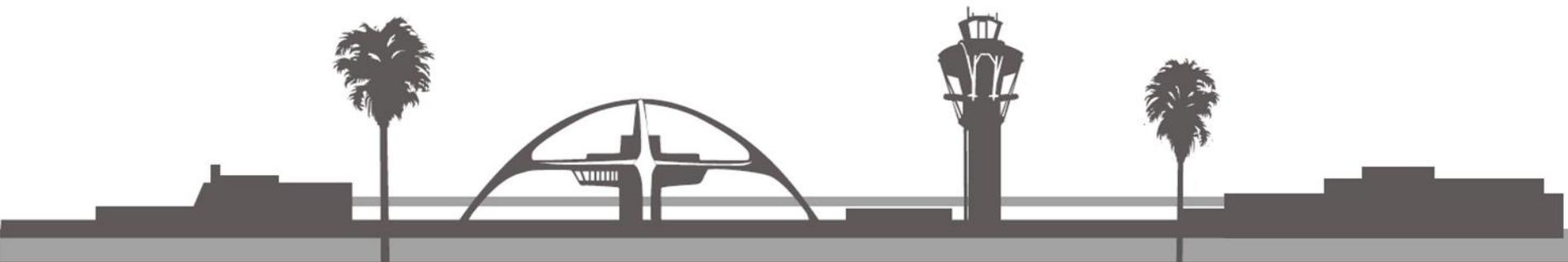

Los Angeles International Airport's Alternative Fuel Vehicle Requirement Program



LAWA Is A Global Leader in Airport Sustainability

- LAWA's Sustainability Program Covers a broad spectrum of resource areas, with great emphasis on air quality:
 - Airport Carbon Accreditation and GHG Reduction Goals
 - LAMP Program/ Employee Rideshare / LAX FlyAway Program
 - Ground Support Equipment Emissions Reduction Policy
 - Sustainable design requirements
 - Electrification projects: 400Hx and Pre-Conditioned Air
 - Clean Construction Program & Independent Third Party Monitor
 - EV Chargers & Clean Fleet Programs
 - New Central Utility Plant
- Goals align with AQMD to reduce NOX and GHG in the South Coast Basin



LAX Requirement Applies to Medium and Heavy-Duty Commercial Vehicles

Applies to: On-Road Equipment over 8,500 lbs.



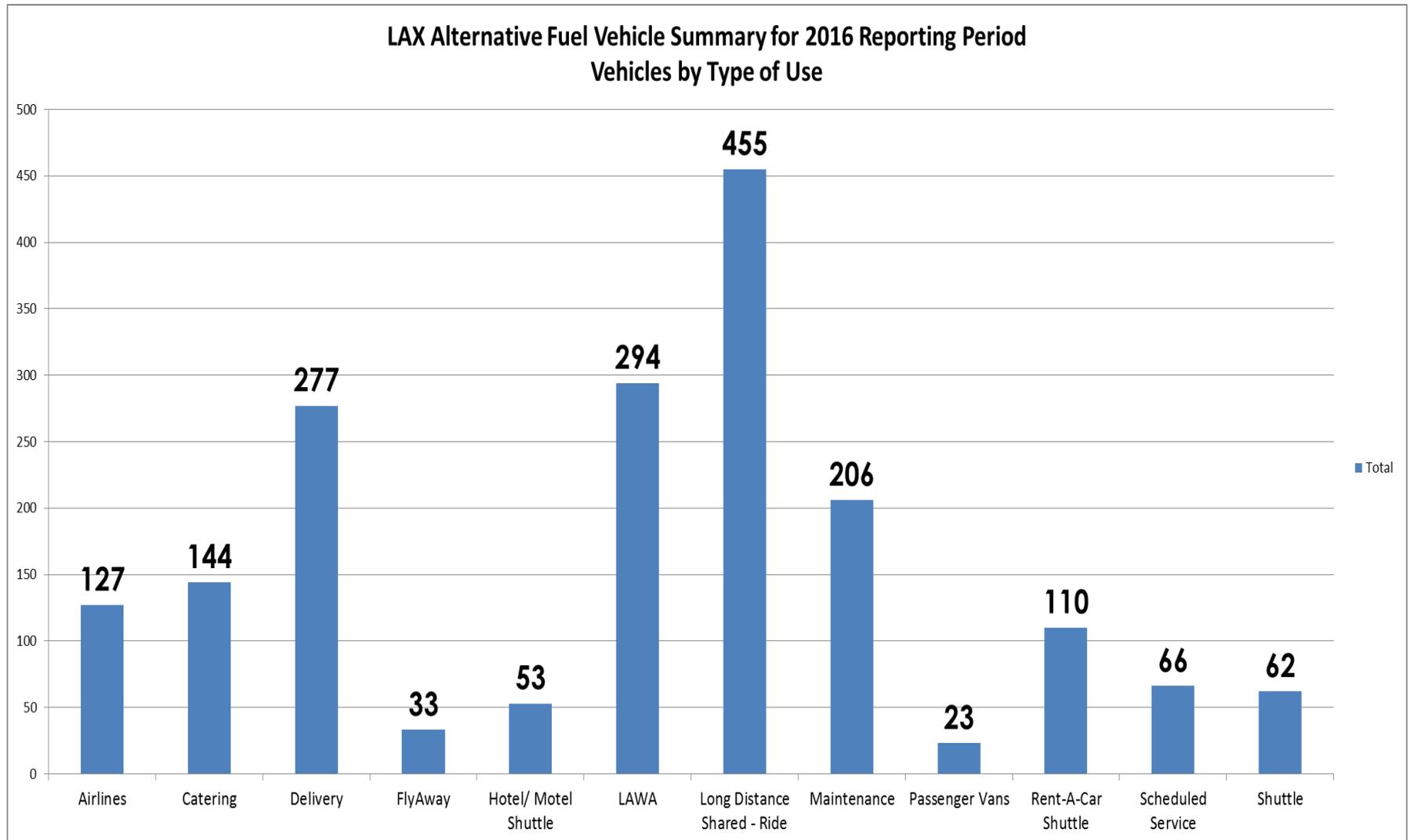
Not: Ground Support Equipment



Not: Construction Equipment

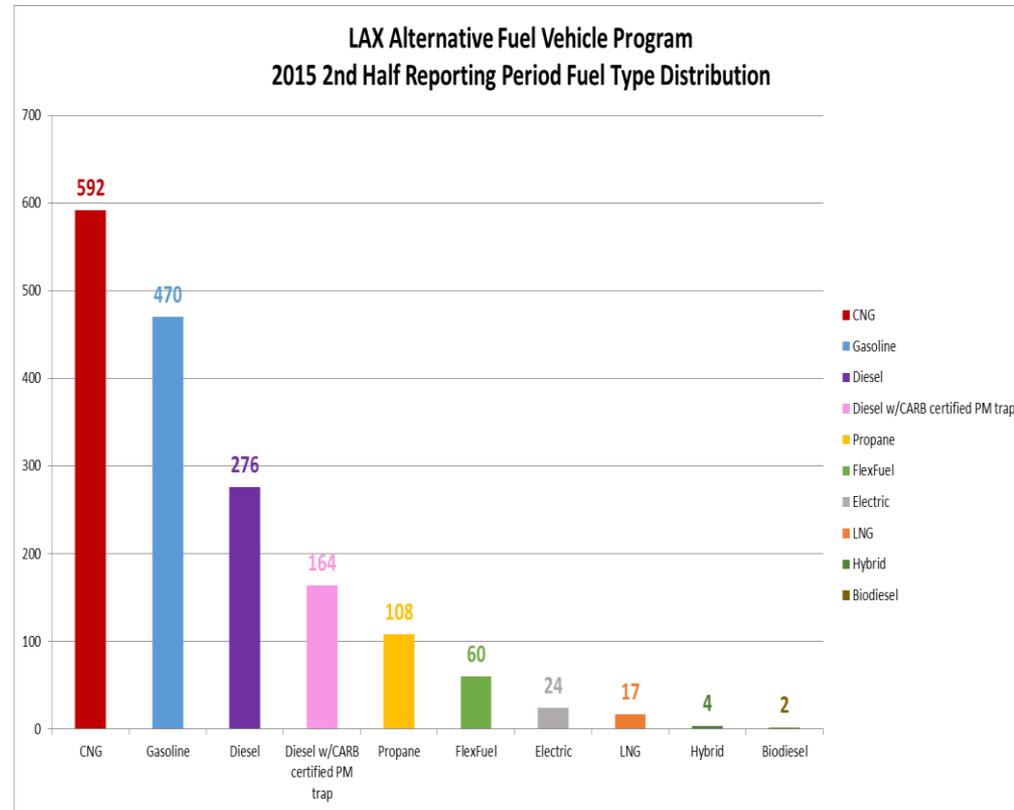


LAX Requirement Covers Broad Range of Vehicles



Progress at LAX

- ✓ 100% of LAX's courtesy shuttle fleet and ADA shuttles are alternative fuel
- ✓ Hotel shuttles are 100% compliant
- ✓ Rental car shuttles are 95% compliant
- ✓ LAX has the largest alternatively fueled airport fleet in the nation
- ✓ In 2015, LAWA implemented on-line reporting and monitoring system to improve tracking and compliance
- ✓ In 2017, Updated 2007 Requirement



The 2007 Requirement Was Out of Date

1. Commitment in the 2005 LAX Master Plan Program's Community Benefits Agreement
2. Requirement went into effect in 2007, and included in all LAX contracts, permits, leases and licenses
3. Targets reduction in criteria air pollutants, such as NOx and PM
4. Applies to on-road medium and heavy-duty vehicles used in operations at LAX
5. Vehicles must be:
 - Alternative fuel
 - Comparable emissions to alt fuel; or
 - Least-polluting vehicle available
6. Total vehicle population ~ 1,900 vehicles



2017 Updated Requirement Covers the Same Fleet As the 2007 Requirement

Vehicles Covered by Requirement

- On-Road Vehicles with a gross vehicle weight rating of 8,500 pounds or greater used in operations at LAX

Vehicles Exempted from General Requirements

- Off-Road vehicles
- Public safety vehicles
- Alternative fuel vehicles previously approved
- Low use vehicles
- Zero-emission vehicles
- Vehicles used in construction activities

General Requirements: Operators must have Alt Fuel Vehicle

- **Low Emission Requirement:** Vehicle must be alternative fuel, be certified by CARB as the lowest possible category of Low Emission Vehicle (LEV) II, LEV III, or meet CARB's Optional Low NOx standards
- **Maximum Age Requirement:** Vehicle must have engine 13 model years or younger or no more than 500,000 miles – whichever comes first
- **Least-Polluting Available:** If compliant vehicles not available, Operator must provide documentation to LAWA for review and approval as Least-Polluting Available Vehicle

Vehicles Considered Low Emission Vehicles

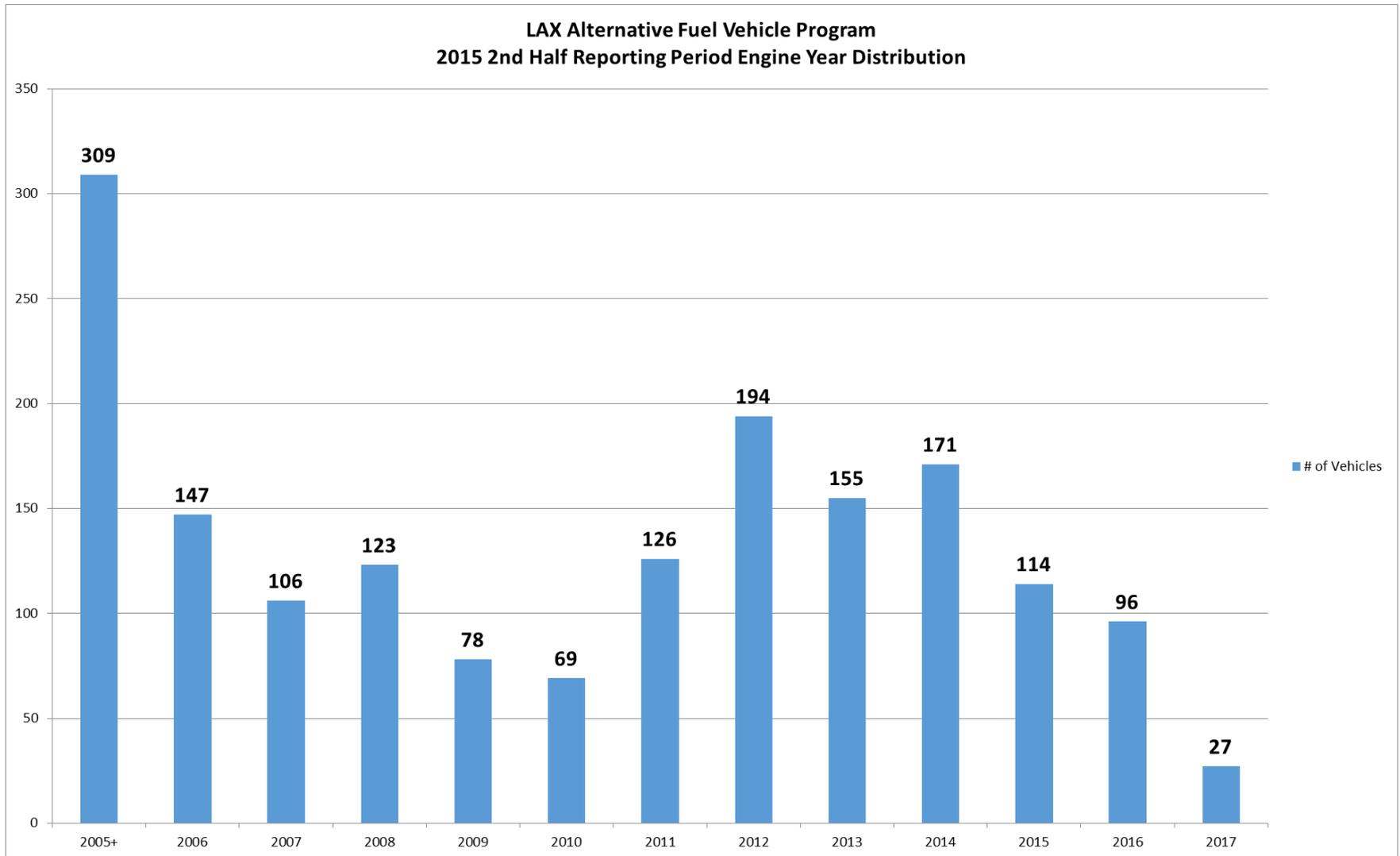
- Alternatively-fueled vehicles such as CNG, LNG, or other Advanced Technologies
- Vehicles that meet CARB's Optional Low NOx standards
- Vehicles certified by CARB in the lowest emitting category of LEV II, e.g., SULVEV or ULEV or LEV III
- Plug-in electric vehicles
- Hydrogen or other zero-emission vehicles

LAWA Will Actively Enforce Updated Requirement

Accountability:

- LAWA will continue to require annual reporting
- Non-compliant operators required to submit a compliance plan within 30 days of notice
- LAWA will suspend or cancel operators authority to work at LAX for 3 or more violations of the Alt Fuel Vehicle Requirement
- Violations include:
 - → failure to submit annual report or alternate compliance schedule
 - → failure to operate a compliant vehicle
- LAWA will review the Alt Fuel Vehicle requirement periodically
- All Operators must be in compliance by April 30, 2019

LAX Fleet Age Distribution



Updated Requirement Will Improve Air Quality

Emission Estimates for 2015 Vehicle Fleet by Scenario						
	ROG	CO	NOx	PM ₁₀	PM _{2.5}	DPM
Scenario 1: 2007 Requirement – 42% Compliance						
Emissions (tpy)	7.0	105	83	9.2	4.3	0.62
Scenario 2: 2017 Requirement – 100% Compliance						
Emissions (tpy)	4.4	90	40	8.6	3.7	0.03
% Reduction	37%	15%	52%	7%	14%	95%

52% reduction in NOx compared to current requirement

15% reduction in CO compared to current requirement

7% reduction in PM₁₀ and 14% reduction in PM_{2.5} compared to current requirement

Questions?

